

A NEW SPECIES OF CHRYSOPHYLLUM FROM TRINIDAD

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In the course of my studies in Ecclinusa it has been necessary to digress repeatedly into other genera of the Sapotaceae. Most intimately involved with Ecclinusa is the genus Chrysophyllum. It was in April of the current year, during my quest of the actual nativity of the so-called Ecclinusa Grisebachii Pierre, reputedly native to Trinidad, but known only from the original collection, that I addressed a query to the Conservator of Forests of that British isle. In turn, I was directed to one of the outstanding students of Trinidad, Dr. Beard, formerly of the Forest Department. Dr. Beard, although now located in Africa and busy with his own work, generously gave my problem painstaking attention. He suggested that I examine a collection of his distributed as Pouteria in the Arnold Arboretum, a collection from a sapotaceous tree known as "Valencia redbark" and "wild kaimit" in Trinidad and which, notwithstanding its typical appearance, had eluded botanical identification and might possibly be, he guessed, a recently collected representative of Pierre's original species.

Obviously Beard's specimen was not Ecclinusa Grisebachii, but no more a Pouteria than Pierre's species is an Ecclinusa. It fell within my concept of the genus Chrysophyllum, of which it appeared to be an unpublished species. Unfortunately the flowering material consisted only of young buds, consequently inadequate for good description.

My interest aroused in Dr. Beard's sapot, I requested additional botanical specimens from the Conservator. Notwithstanding the sketchy allusion I made to the undescribed tree, Mr. R. S. Ayliffe, on a visit to the New York Botanical Garden undertaken for the purpose of studying the Loranthaceae of Trinidad, handed to me personally such ample flowering material, that the only important matter left to be desired is the fruit with ripe seeds.

As Mr. Ayliffe informed me that duplicates of his collection had been forwarded to Kew, I wrote to N. Y. Sandwith, who, by return mail, encouraged me to study and describe the new Chrysophyllum.

It is an unusual pleasure to contemplate the cooperation had from Dr. Beard, Mr. Ayliffe, Mr. Sandwith, and other scientists of good will, who graciously expend their energies and time in a pure simple effort to aid botanical research.

CHRYSOPHYLLUM BEARDII Monachino, sp. nov.

Arbor; petiolis 0.8--1.5 cm. longis; laminis foliorum obovatis 5--13 cm. longis, 3--6.5 cm. latis, ad apicem plerumque e-marginatis, ad basin obtusis vel subacutis, subtus brunneis vel griseis sericeo-tomentosis; venis lateralibus arcuatis 7--13-jugis, inter se plerumque 0.8--1.4 cm. diversis, supra subim-

pressis; reticulo venularum supra subimpressis, subtus subelevatis; inflorescentiis glomeratis; pedicellis ca. 2 mm. longis; sepalis ovatis 1.6--1.9 mm. longis, extus tomentosus, intus glabris; tubo corollae ca. 1.3 mm. longo, lobis ca. 2.8 mm. longis, extus pubescentibus; filamentis ca. 1.8 mm. longis; ovario tomentoso; stylo ca. 1.5 mm. longo, ad apicem conico.

Large tree with reddish flaky bark; branchlets rather slender, the young parts dark-brown tomentose; leaves sometimes subopposite, the petioles 0.8--1.5 cm. long, the blades subcoriaceous, broadly obovate (individual ones rarely elliptic), 5--13 [--15] cm. long, 3--6.5 cm. broad, emarginate or rarely rounded at apex, obtuse to subcuneate at base, the margins somewhat inrolled, the upper side dull olive-green and glabrous at maturity (except for the sparsely hairy channel of the midrib), the under side dark-brown to fulvous sericeous-tomentose or becoming gray, the hairs malpighious, mostly appressed, eventually deciduous, the lateral nerves arcuate, 7--13 pairs, with an average distance apart of 0.8--1.4 cm. (individual distances 0.4--1.5 cm.), running to the margins, slightly impressed on the upper surface of the leaf, the different branches in the nervature between the laterals of almost uniform strength, obscure, upon magnification seen faintly raised beneath and slightly impressed above; flowers numerous, glomerate, the pedicels about 2 mm. long (that of a young fruit 5 mm. long), dark-brown tomentose with appressed hairs, the sepals 5, broadly ovate, 1.6--1.9 mm. long, obtuse at the apex, appressed-tomentose outside, glabrous inside, the corolla open-campanulate, about 6 mm. across, appressed-pubescent mostly on the lobes outside, glabrous inside, the corolla-tube about 1.3 mm. long, thickened toward the throat, the corolla-lobes 5 (sometimes 4), spreading at maturity, ovate-lanceolate, about 2.8 mm. long, 1.8 mm. wide, obtuse at the apex, the filaments inserted slightly above the base of the corolla-lobes, slender, about 1.8 mm. long, attenuate toward the apex which is very fine, sharply inflexed near the apex in bud, the anthers extrorse in bud, becoming inverted and introrse at maturity, ovate and apiculate at the apex, entire length about 1 mm. long, glabrous; pistil about 2 mm. long, the ovary densely tomentose, 5-celled and 5-ovulate (sometimes 4-merous), the ovules axile near the summit of the cell, the style about 1.5 mm. long, conical at apex, the stigmatic lobes obscure; young fruit dark-brown tomentose.

Type: R. S. Ayliffe s.n. [Monachino 526], Trinidad, British West Indies, Long Stretch Reserve, along main road near Turure junction, 23 August 1949, deposited in the Britton Herbarium at the New York Botanical Garden; called "wild kaimit".

Additional specimens examined: R. S. Ayliffe s.n. [Monachino 527], Trinidad, Long Stretch Reserve, alongside of main road about one-half mile from Turure junction, 23 August 1949, in Britton Herb., N. Y. Bot. Gard. R. S. Ayliffe s.n. [Monachino 528], Trinidad, Melayo, 31 May 1949, in Britton Herb., N. Y. Bot. Gard. John S. Beard 125, Trinidad, Long Stretch Reserve, alt. 50 m., marsh and dry evergreen forests, July 1943, tree

25 m. high, trunk 1 m. diam., bark reddish, very flaky, in herb. Arnold Arboretum (two sheets of the same number, one of which, containing young fruits, bears the date April 28, 1943; the other has flower-buds only).

In a late communication Dr. Beard informs me that in August 1944 he made a second collection of "Valencia redbark", J. S. Beard 341, also deposited at the Arnold Arboretum. I have not yet examined this specimen.

Mr. Ayliffe states that the species fruits in April and May. It is in full flower in August. Dr. Beard states that it is a typical big sapotaceous tree with milky latex and very red bark. It is the tree referred to as "Valencia redbark" or "wild kaimit" in his Natural Vegetation of Trinidad and is to be found commonly in parts of the Long Stretch Reserve and also in the forest which comes down to the coast a few miles north of Balandra. He further informs me that he once showed the tree to D. B. Fanshawe, of the British Guiana Forest Service, when he visited Trinidad and Mr. Fanshawe said that it appeared to be the same as an unidentified tree he knew in a similar habitat in the N. W. District of British Guiana.

"Wild kaimit" in Beard's Natural Vegetation of Trinidad sometimes corresponds to species of Macropholis and other Chrysophyllum species as well as C. Beardii. Our plant is mentioned on page 34 where it is named "Pouteria sp. (unidentified), 'Valencia redbark' (J. S. B.)." On page 132, under the discussion of floristic composition of the Marsh Forest, "wild kaimit, Pouteria sp. (unidentified)" is noted to be a dominant tree in the upper story and that it has been recorded elsewhere in semi-evergreen seasonal forest on the east coast. In Table XXIII, Marsh Forest species attaining upper story, it is listed as second in abundance.

Only two species of Chrysophyllum, C. cainito L. and C. argenteum Jacq., were treated by A. W. Hill and N. Y. Sandwith in the Flora of Trinidad and Tobago (1947; manuscript completed in 1940). C. Beardii bears no resemblance to these. In Arthur Cronquist's revision of the South American species of Chrysophyllum (Bull. Torrey Bot. Club 73: 286--311. 1946) our novelty answers closest to C. cochlearium LeComte, a species described from French Guiana. A fragment of the type of LeComte's species borrowed from the Chicago Natural History Museum was compared with C. Beardii. The two display very close affinity, but C. cochlearium can be distinguished by its nervature which is slightly elevated on the upper surface of the leaves, the base of the blade which is narrowly decurrent on the petiole, and the darker color of the tomentum on the under side of the leaves. While the leaf-apex of our plant is prevalently emarginate in all the specimens examined, that of C. cochlearium was described as rounded or obscurely short-acuminate.